

REMARKS

Claims 1 through 20 are in the case.

New claim 21 is being submitted.

New claim 21 is submitted in the basis of the Description,
page 12 lines 20 through 22,
page 13 lines 1 through 16,
page 13 lines 18 through 22,
page 14 lines 7 through 13,
page 15 line 8 through page 17 line 5,
page 18 line 12 through page 19 line 3,
page 19 lines 16 through 20.

According to Office Action of December 13, 2002, claims 1-18 stand rejected under 35 U. S. C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is unclear how the invention operates. Applicant describes directions of lift with respect to a denture or implant, however, it is not clearly shown how these elements relate. The operation of element 15 is unclear, for example, how is the stop released.

The new claim 21 is being submitted to obviate the rejection.

The element 15 is a limit stop face 15 of the locking device A. Possibly, the Office Action considered parts 7 as the element 15, since in Fig.1, points 7 and limit the limit stop face 15, are coinciding partly. Parts 7 are parts of the locking bar R, as seen from the Fig.3 of the Drawings.

Then, the logic procedure of the stop release is as follows: the first stage – pushbutton D is pushed, and the locking bar R with parts 7 moves from the limit stop face 6 horizontally in order to unblock element A (when the part 7 does not contact the locking device A); the second stage – spring F is compressed and the horizontal shift force from pushbutton D begins to be transferred through the bolt B into the vertical motion of the released locking device A. As the locking device A is permanently contacted with the fixedly seated element S through the limit stop face 11, then the vertical force from A to S results to the lifting of the connection element (the casing G with all elements inside).

Drawings

The drawings filed March 22, 2001 stand objected to by the examiner because the letter designations located within darkened cross-hatching are unclear. The drawing do not clearly show the invention, a figures or figures showing a denture and/or implant and the orientation of the elements is required. No new matter may be added.

Revised drawings have been prepared and submitted on March 12, 2003.

Specification

The specification stands objected to because it appears to be a translation of a foreign filed disclosure, and as such, contains errors in form and grammar, for example, see

page 3, line 4, "in the course of line" and line 16, "gripped into a groove".

The entire disclosure must be checked and placed in proper U.S. form. Headings are suggested.

Applicant is working on the headings of the application and will provide the same with the next correspondence to the Office.

The Office Action refers to claim rejections - 35 USC § 103.

Claims 1-18 stand rejected under 35 U.S. C. 103(a) as being unpatentable over Romagnoli (4345901). Romagnoli shows a connecting element having a slidable locking bar 13, Fig. 5, spring 15 and push button 14. The disengagement of 13c from groove 6 will obviously release inherent tension between the elements and effect a slight lifting. Elements 13c and 6 inherently comprise stop surfaces. The specific shape of the inferentially claimed denture or tooth or implant is given no patentable weight. The specific shape of the elements is an obvious matter of choice in the shape of known structure to the skilled artisan.

The rejection is respectfully traversed in view of the newly added Claim 21.

The present application Claims require the locking device (A) which comprises an inclined plane corresponding to the inclined plane of the bolt (B) and which can move vertically only (perpendicular to the locking bar). In clear contrast to the present application, the reference of Romagnoli has a locking device 13 which can move horizontally only. This is cited in the reference of Romagnoli (col.3, lines 49-56): “ To detach the prothesis, it suffices to press on tip 14, thus moving the thinner section 13b of sliding pin 13 back in front of cavity 11, i.e. level with groove 6. In this position, there is nothing more to hold the female part to male part 5 since groove 6 is completely disengaged, so that the prothesis can be freely lifted upward, i.e. in line with axis of the corresponding frustroconical fixed and movable parts.”

Therefore, the reference of Romagnoli teaches that the prothesis lifting is performed manually, wherein one must permanently press on tip 14 with one hand and to lift the prothesis with another hand. In contrast, according to the present application the prothesis lifting (pull-out) is performed automatically only after pressing on the pushbutton D, because horizontal force of the spring (F) is transferable into the locking device (A) vertical move, that lifts the casing (prothesis) G.

The Office Action states that in the reference of Romagnoli “The disengagement of 13c from groove 6 will obviously release inherent tension between the elements and effect a slight lifting.”

But no force for lifting seems to be available in the reference of Romagnoli where nothing is shown to hold the frustroconical female part to the male part. Then, in the reference of Romagnoli tension between two frustroconical elements remains the same as before the pin 13 is moving.

However, claim 21 of the present application requires two stages in the prothesis detachment: the first stage is the locking device unblocking, and only then a second stage – automatical lifting through horizontal shift force transfer to the vertical direction. This second stage of motion is completely absent in the teaching of the reference of Romagnoli.

The claim 21 of the present application requires that the locking bar (R) with pushbutton (D) is connected with the bolt (B) through the spring (F) in order to postpone the movement of the bolt (B) till the locking device (A) will be unblocked. This feature is completely missing in the reference Romagnoli.

The claim 21 of the present application requires a locking device (A) with two stop surfaces, wherein the locking bar (R) has some part movable from one stop surface to another one for the locking device (A) unblocking, and the part of the locking bar (R) remains in unblocking position after the pushbutton is pushed and the prothesis lifting has been performed. In clear contrast to the present application, the reference of Romagnoli does not have two separate stop surfaces, and the locking bar 13 does not remain in

the detachment position after the pressing of the pushbutton is over, because the spring 15 returns the locking bar 13 in the starting position.


Applicant respectfully submits that claim 21 of the present application clearly and expressly defines over the Romagnoli reference.

Applicant submits that the prior art made of record neither anticipates nor renders obvious the present invention.

Reconsideration of all outstanding rejections is respectfully requested.

All claims as presently submitted are deemed to be in form for allowance and an early notice of allowance is earnestly solicited.

Respectfully submitted,
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MARKED UP VERSION OF THE AMENDED CLAIMS

(Version with marking to show changes made)

21. (new) A connection element for the attachment of removable tooth dentures to crowns of teeth or tooth implants, comprising

a locking bar (R) carrying a pushbutton (D), wherein the locking bar (R) is supported slidable in horizontal direction, and wherein the locking bar (R) comprises a bore hole (1) and parts (7) with a side flattenings (9), and wherein parts (7) comprise a limit stop (6),

a spring (F) disposed inside the locking bar (R),

a bolt (B) having a side disposed at the spring (F) and an opposite side with an inclined plane, wherein the spring (F) and the bolt (B) are guided in the bore hole (1) of the locking bar (R),

a locking device (A) of the plate shape disposed at the bolt (B) and having an extension (4) and an inclined plane corresponding to the inclined plane of the bolt (B),

a casing (G) of a box shape having a recess (5) and a bar eye (8),

wherein the casing (G) contains the locking bar (R) with the pushbutton (D), the spring (F), the bolt (B) and the locking device (A), and wherein the casing (G) is attachable vertically at a fixedly seated element (S) formed at a tooth crown or a tooth implant,

and wherein the locking device (A) is such supported in the casing (G) that the locking device (A) essentially can perform only a vertical motion perpendicular to the locking bar,

wherein the extension (4) of the locking device (A) is disposed in the recess (5) of the casing (G) and thus secures the locking device (A) and the locking bar (R) against rotation,

wherein the locking bar (R) is guided inside the casing (G),

wherein the locking device (A) disposed a limit stop face (11) and a limit stop (14),

and wherein the parts (7) of the locking bar (R) disposed between the locking device (A) and the fixedly seated element (S) of a tooth crown,

and wherein after the pushing of the pushbutton (D), the locking bar (R) together with the parts (7) moves horizontally in order to make the bar eye (8) to be completely covered by the side flattenings (9) of the locking bar (R),

and wherein the limit stop (6) of the locking bar (R) moves from the limit stop face (11) to the limit stop (14) releasing the locking device (A) before the spring (F) is compressed,

and wherein after the spring (F) is compressed, the pushbutton (D) transfers horizontal motion to the bolt (B),

and wherein the bolt (B) pushes the locking device (A) vertically to the fixedly seated element (S),
and wherein the casing (G) with the locking bar (R), with the spring (F), with the bolt (B) and with the locking device (A) is pulled out vertically from the fixedly seated element (S) of a tooth crown,
and wherein the parts (7) of the locking bar (R) are disposed in the limit stop (14) and the limit stop face (15).

